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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,775	10/24/2000	Charles D. Ray	Q00-1042-US1	2360

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HANSRA PATENT SERVICES  
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BELLINGHAM, WA 98226

EXAMINER

HOLDER, REGINA NEAL

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/695,775	RAY ET AL.	
	Examiner	Art Unit	
	Regina N. Holder	2651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7</u> . | 6) <input type="checkbox"/> Other: _____                                    |

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**DETAILED ACTION**

1. The pre-amendment filed 3/26/03 has been entered. Claims 1-12 and 30-39 are pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-2, 6, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Elliot et al (6,351,342).

Regarding claim 1, Elliot et al teaches a data transfer driver for a data storage device including recording media having one or more surfaces, one or more transducers positionable by an actuator, the driver comprising one or more head interfaces (22<sub>0</sub>–22<sub>n</sub>) and a mode controller (multiplexing circuitry) for controlling the operation of each head interface for selectively reading data from at least one recording surface via at least one transducer while writing data to

at least one recording surface via at least one transducer head. See fig. 3 and col. 5 line 65 – col. 6 line 7.

Regarding claim 2, these limitations are met in the rejection of claim 2.

Regarding claim 6, Elliot et al teaches the head interface comprises a read circuit (22<sub>0</sub> – 22<sub>n</sub>) and inherently teaches a write circuit. The write circuit is inherent because there must be a write circuit to perform writing by each head.

Regarding claim 12, Elliott et al teaches a disk drive and one or more magnetic disks. See fig. 1 and its corresponding description.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 7-11 and 30-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot et al in view of Tomita (6,219,722).

Regarding claim 3, Elliot et al does not specifically recite the mode controller controls the operation of the head interfaces based on configuration information, where the configuration information includes data transfer information and transducer head selection.

Tomita teaches the mode controller controls the operation of the head interfaces based on configuration information, where the configuration information includes data transfer information and transducer head selection. See col. 5 line 54 – col. 6 line 31.

It would have been obvious to one of ordinary skill in the art at the same time the invention was made to modify the teachings of Elliot et al to include the teachings of Tomita, motivation being to provide high speed head switching.

Regarding claim 4, Tomita teaches the configuration information includes a read mode, a write mode, and a servowrite mode. See col. 5 line 54 – col. 6 line 31 and col. 7 lines 10-48. However, Tomita does not teach read while write mode. Elliot et al teaches this mode. When the references are combined, the combination suggests to also include a read while write mode in the configuration information.

It would have been obvious to one of ordinary skill in the art at the same time the invention was made to modify the teachings of Elliot et al to include the teachings of Tomita, motivation being to provide high speed head switching.

Regarding claim 5, Tomita teaches a control interface connected to the mode controller, the control interface for receiving configuration information wherein the mode controller controls the operation of the head interfaces based on the configuration information. See col. 5 line 54 – col. 6 line 31.

It would have been obvious to one of ordinary skill in the art at the same time the invention was made to modify the teachings of Elliot et al to include the teachings of Tomita, motivation being to provide high speed head switching.

Regarding claims 7-9, these limitations are met in the rejection of claims 1, 3, and 4.

Regarding claim 10, Elliot et al teaches providing one transducer per surface (abstract) and writing data while reading data on the same surface (col. 5 line 65 – col. 11). Because this is the same surface, Elliott is also using the same transducer.

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Regarding claim 11, Elliott et al teaches writing data to at least one surface via one transducer while reading data from at least one surface via another transducer. See col. 5 line 65 – col. 6 line 3.

Regarding claim 30, these limitations are met in the rejection of claims 1, 3, and 4. Elliot et al teaches a head position actuator (18) and drive controller (28). Tomita also teaches an actuator (inherent) and drive controller (38) for providing configuration information to the preamplifier.

Regarding claims 31-35, these limitations are met in the rejection of claims 2-6.

Regarding claim 36, these limitations are met in the rejection of claim 10.

Regarding claims 37-39, Elliott et al also teaches to use this invention with a dedicated servo system. See col. 5 lines 37-42. It is well known that a dedicated servo system includes a reference disk having a reference pattern comprising servo clock information and servo position information and official notice is taken thereof. Elliot also teaches the drive controller controlling the actuator to position and maintain one or more transducer heads on one or more disk surfaces while writing servo patterns onto one or more data disk surfaces. See fig. 2 and its corresponding description. It is also well known to provide pattern generators for servo patterns and official notice is taken thereof.

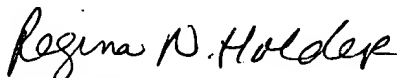
### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina N. Holder whose telephone number is (703) 308-4078. The examiner can normally be reached on 6:30 a.m. - 5:00 p.m. Mon.-Thurs..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
Regina N. Holder  
Primary Examiner  
Art Unit 2651

rnh  
April 4, 2003